

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Petition of Commonwealth Electric
Company d/b/a NSTAR Electric for
Approval to Construct and Operate a
Transmission Line Pursuant to G.L. c.
164, § 72

DTE # 05-01

**INITIAL BRIEF OF THE LIMITED PARTICIPANT NANTUCKET ELECTRIC
COMPANY**

I. INTRODUCTION

a. The Petition

This proceeding involves a petition filed by Commonwealth Electric Company d/b/a NSTAR electric (“NSTAR”) seeking a determination from the Department of Telecommunications and Energy (the “Department”) that, pursuant to G.L. c. 164, § 72 , NSTAR’s proposed 115 kilovolt (“kV”) transmission line is necessary, serves the public convenience and is in the public interest.

Specifically, NSTAR requests approval to construct a transmission line (the “Line”) less than 4,000 feet in length between NSTAR’s Barnstable Switching Station and a new substation that Nantucket Electric Company (“Nantucket”) is constructing at Merchant’s Way in Barnstable. From the Merchant’s Way Substation, NSTAR proposes to route the Line underground as it crosses the existing 23 kV and 115 kV lines on its Right-of-Way (“ROW”). At the switching station, the Line would be connected to the third bay and Line # 115 would be relocated to the fourth bay.

b. Procedural History

NSTAR filed its petition with the Department on January 13, 2005. The Department held a public hearing in Barnstable regarding the Line on February 16, 2005. Subsequently, on February 18, 2005, Nantucket filed a Petition for Leave to Participate as a Limited Participant, which the Department granted on March 1, 2005. Thereafter, the Department issued two sets of Information Requests to which NSTAR responded on March 22, 2005 and April 8, 2005, respectively.

The Department held an Evidentiary Hearing in Boston on April 14, 2005. NSTAR presented the direct testimony of Kevin F. McCune, Senior Environmental Engineer; Charles P. Salamone, Director of System Planning; and Gregory R. Sullivan, Director of Transmission Engineering. At the close of the hearing, NSTAR moved into evidence the exhibits that had been marked for identification, including its Petition, its prefiled testimony, supporting exhibits and the responses to Information Requests. The Hearing Officer held the record open for the response to one outstanding record request.

II. SUMMARY OF FACTS

The proposed Line will run underground for approximately 200 feet from Nantucket's Merchant's Way Substation into NSTAR's ROW. (NSTAR-KFM-1 at 2, line 15) At that point, the Line will rise aboveground and will run approximately an additional 3,500 feet to NSTAR's Barnstable Switching Station. (Id. at line 18) The ROW is about 270 feet wide and runs through an industrially-zoned area. There are presently three existing overhead lines on the ROW. (Id. at lines 19-21) NSTAR considered various alternatives to the proposed Line including tapping into the Line

#122 opposite the Merchant's Way Substation site. However, NSTAR rejected that option because of reliability concerns and space limitations within the ROW.

(NSTAR-GRS-1 at 6, lines 8 – 16)

Nantucket has requested an interconnection with NSTAR's PTF facilities in Barnstable. (NSTAR-CPS-1 at 3, lines 16 – 17) Nantucket has also obtained approval from the Department to construct a new 46 kV underground and submarine transmission line from Nantucket to Cape Cod to address increasing load growth on the Island of Nantucket. (Id. at 2, lines 18 – 20) That 46 kV line will make landfall in the Town of Yarmouth (sic, Barnstable) and proceed to the Merchant's Way Substation where, if the Department approves NSTAR's Petition, it will be stepped up in voltage to 115 kV and interconnected to NSTAR's Barnstable Switching Station via the proposed Line. (Id. at lines 22 – 23)

The proposed Line is needed so that NSTAR can honor its obligation under the New England Power Pool ("NEPOOL") Open Access Transmission Tariff ("NEPOOL OATT") to provide a transmission interconnection to Nantucket as an "Eligible Customer" under Section 1.23 of the NEPOOL OATT. (NSTAR-CPS-1 at 3, lines 9 – 12) Section 40.2 of the NEPOOL OATT establishes the obligation of NEPOOL participants, such as NSTAR, to plan, construct, operate and maintain Pool Transmission Facilities ("PTF") in accordance with Good Utility Practice in order to provide customers with Regional Network Service ("RNS") over PTF. (Id. at lines 12 – 16).

The proposed Line would be located on the ROW in an industrially-zoned area and is a permitted use under the Zoning Ordinances of the Town of Barnstable.

(DTE-1-2) Current land uses in the area include a lumberyard, a contractor's equipment lay-down space and a landscaping firm. (NSTAR-GRS-1 at 3, lines 10 – 12) The nearest residence is located more than 500 feet from the proposed Line. (DTE-1-5) A treed buffer to the north of the ROW separates it from Route 6. (Id. at Line 13) The Line would be visible from Route 6 if the observer were able to see through the foliage on the trees. (E.Hr. Tr. at 37, lines 3 – 4) Likewise, the Line would be visible from a number of the abutting business properties. However, the incremental visual impact of the Line should be negligible because NSTAR plans to place the Line near the middle of the ROW between the existing lines. (DTE-1-6)

Construction of the Line would generally take place between the hours of 7:00 a.m. and 6:00 p.m. (DTE-1-7) Should off-hours work be required for schedule recovery following poor weather or other delays, it would be an extension of normal work, i.e., truck movement and the use of small excavators, cranes and rigging. (Id.) Noise from construction should be similar to that generated by the vehicular traffic on Route 6 and the equipment used in the lumberyard that abuts the ROW. (Id.)

After review of data from the Cape Cod Commission GIS and Mass GIS systems, NSTAR determined that the proposed Line lies outside of resource areas that trigger the Commonwealth's requirement of contacting the Natural Heritage and Endangered Species Program. (DTE-1-8) The proposed Line would neither cross surface waters, nor affect wetlands, nor require the clearing of any vegetation beyond shrubs and brush that impede access to the ROW. (NSTAR-KFM-1 at 3, lines 12 – 19)

The addition of the proposed line will have minimal effects on the EMF at the Barnstable Switching Station and along the ROW because the Line would essentially redistribute existing power flow. (DTE-1-12; E.Hr. Tr. at 32) Magnetic field changes at Barnstable Switching Station would be minimal because the total power flow will be unchanged. However, the electric fields would be increased slightly where the station bus is proposed to be expanded. (DTE-1-12) Change to EMF outside the ROW will be minimal because the Line would be located near the center of the ROW and its phases arranged in a vertical configuration. (Id.)

The NEPOOL Transmission Task Force and the NEPOOL Stability Task Force reviewed the proposed Line, the NEPOOL Reliability Committee approved the proposed changes to the transmission system. (DTE-1-13) Pursuant to Schedule 12C of Section II of the ISO Tariff, certain costs associated with the Line are pool-supported PTF costs. (Id.)

NSTAR and Nantucket entered a Facilities Study Agreement and the resulting Facilities Study identified the upgrades, costs and alternatives associated with Nantucket's request as a transmission customer for service. (NSTAR-GRS-4 at 1) The Facilities Study included the analysis of several alternatives. (Id.) Among them was the possibility of interconnecting NEC's 46 kV submarine transmission line directly to existing transmission lines on the ROW. (DTE-1-17) However, NSTAR rejected this alternative because there is not enough physical space on the ROW to install the circuit breaker, circuit switchers and other necessary equipment required to tap into the existing transmission lines. (Id.) The proposed Line was recommended, based upon the results of the Facilities Study, because it achieves the objective of

providing firm service to Nantucket, while avoiding construction-related outages to customers and meeting system design criteria in a cost-effective manner. (Id.)

In addition, NSTAR customers will derive a particular benefit from facilities associated with the proposed Line. In particular, the proposed facilities include a special protection system (“SPS”). (E. Hr. Tr. at 56, lines 15-17; DTE 2-4) The SPS will provide additional benefits to NSTAR’s customers on Cape Cod. (E. Hr. Tr. at 60, lines 15-23; Id. at 61, lines 12-17) In fact, the SPS that is part of the proposal before the Department will cut down the number of transformers on Cape Cod that are interrupted if NSTAR’s lines 120 and 122 fail and breakers 182, 282, 482 and 582 open. (Id. at 59, lines 8-10 and 60, lines 15-23) A primary benefit of the SPS addition will be to allow NSTAR to reduce the number of customers dropped under such circumstances; NSTAR will be able to keep more customers on its system. (Id. at 62, lines 3-10)

III. STANDARD OF REVIEW AND ARGUMENT

a. Standard of Review

An electric company seeking approval to construct a transmission line must file, pursuant to G.L. c. 164, § 72, with the Department a petition for:

authority to construct and use...a line for the transmission of electricity for distribution in some definite area or for supplying electricity to itself or to another electric company or to a municipal lighting plant for distribution and sale...and shall represent that such line will or does serve the public convenience and is consistent with the public interest...The [D]epartment, after notice and a public hearing in one or more of the towns affected, may determine that said line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.

The Department, in making a determination under c. 164, § 72, considers all aspects of the public interest. *Boston Edison Company v. Town of Sudbury*, 365 Mass. 406, 419 (1969); *Massachusetts Elec. Co. and New England Power Co.*, D.T.E. 99-70, at 2 (2000) (“*MECo/NEP*”) G.L. c. 164 § 72 permits the Department to prescribe reasonable conditions for the protection of the public safety. *Boston Edison*, 356 Mass at 419-420. All factors affecting any phase of the public interest and public convenience must be weighted fairly by the Department in a determination under G.L. c. 164 § 72. *Town of Sudbury v. Dept. of Pub. Utils.*, 343 Mass. 428, 430 (1962).

In evaluating petitions filed under G.L. c. 164 § 72, the Department examines: (a) the need for, or public benefits of, the present or proposed use; (*see MECo/NEP*, D.T.E. 99-70, at 6-7, 17-18 (2000)); (b) the environmental impacts or any other impacts of the present or proposed use (*Id.* at 20-22); and (c) the present or proposed use and any alternatives identified (*Id.* at 18-20). The Department then balances the interest of the general public against the local interest and determines whether the transmission line is necessary for the proposed purpose, will serve the public convenience and is consistent with the public interest.

b. Argument

1. The Proposed Line Is Needed.

NSTAR is obligated under the NEPOOL OATT to provide Nantucket the requested transmission interconnection for its planned 46 kV underground and submarine transmission line. (NSTAR-CPS-1 at 3, Lines 9 – 12) The Facilities Study completed by NSTAR determined that the proposed Line is required in order

for NSTAR to provide the interconnection. (NSTAR-GRS-4 at i) In a separate proceeding, the Department found that Nantucket's planned 46 kV underground and submarine transmission line is necessary to meet the needs of electric customers on the Island of Nantucket. *Nantucket Electric Company*, D.T.E. 04-10 (2004).

Therefore, inasmuch as the Department has determined that NEC's planned 46 kV underground and submarine transmission line is necessary and, as demonstrated by the Facilities Study and other evidence in the record, that NSTAR does not have existing facilities to achieve the requested transmission interconnection, the proposed Line is needed.

2. Environmental and Other Impacts Will Be Minimal.

The proposed Line would not affect resource areas, cross surface waters, affect wetlands, nor require the clearing of any vegetation beyond shrubs and brush that impede access to the ROW. (NSTAR-KFM-1 at 3, Lines 12 – 19; DTE-1-8) Located in an industrially-zoned area and a permitted use under the Town of Barnstable's zoning ordinances, the proposed Line would have minimal impact on current land uses in the area, which include a lumberyard, a contractor's equipment lay-down space and a landscaping firm. (DTE-1-2; NSTAR-GRS-1 at 3, Lines 10 – 12) Noise from construction should be similar to that generated by the vehicular traffic on the adjacent Route 6 and the equipment used in the lumberyard that abuts the ROW. (DTE-1-7) Although, the Line would be visible from a number of the abutting business properties, the incremental visual impact of the Line should be negligible because NSTAR plans to place the Line near the middle of the ROW between the existing lines. (DTE-1-6) Given the evidence and testimony presented,

the Department can reasonably find that the environmental and other impacts of the proposed Line are minimal.

3. The Proposed Line is a Reasonable Alternative.

The proposed Line will run underground for approximately 200 feet from Nantucket's Merchant's Way Substation and once in the ROW, the Line will rise aboveground and run approximately an additional 3,500 feet to NSTAR's Barnstable Switching Station. ((NSTAR-KFM-1 at 2, lines 15 - 18) The ROW is about 270 feet wide, runs through an industrially-zoned area and there are presently three existing overhead lines on the ROW. (Id. at lines 19-21) The recommendation of the proposed Line was the result of a detailed Facilities Study that identified the upgrades, costs and alternatives associated with Nantucket's request as a transmission customer for service. (NSTAR-GRS-4 at 1) The Facilities Study included the analysis of several alternatives. (DTE-1-17) The proposed Line was recommended over the alternatives because it achieves the objective of providing firm service to Nantucket, while avoiding construction related outages to customers and meeting system design criteria in a cost effective manner. (NSTAR-GRS-4) Given the evidence and testimony presented, the Department can reasonably find that proposed Line is a reasonable alternative.

IV. CONCLUSION

The Department has found that Nantucket's planned 46 kV underground and submarine transmission line is necessary to serve growing electric demand on the Island of Nantucket. Based on that fact plus the record in this docket, the Department should find that the proposed Line, which is required for NSTAR to be able to

provide an interconnection to Nantucket, is needed and provides public benefits by facilitating the interconnection and by improving service to NSTAR's customers on Cape Cod. Furthermore, based upon the evidence in the record, the Department should find that the proposed Line is a reasonable selection among the alternatives. Additionally, and also based upon the evidence in the record, the Department should find that the public benefits of the proposed Line outweigh the minimal environmental and other impacts.

THEREFORE, for all of the above stated reasons Nantucket submits that the Department should find the proposed Line is necessary in order to serve the public convenience and is consistent with the public interest. Consequently, Nantucket supports NSTAR's Petition seeking authority to construct the proposed Line pursuant to G.L. c. 164, § 72.

Respectfully submitted,

Nantucket Electric Company

By its Attorney,

April 25, 2005